OPERATIONAL

RISK

MANAGEMENT

"Avoid the distractions of debates on political correctness and focus on the soldiers' mission, one that remains fixed, determined, inviolable. It is to win our wars."

General Douglas MacArthur   April, 1962

"We're out of the do more with less business. We can do less with less or we can do more with more, but we will no longer do more with less."

Admiral Jay Johnson Naval War College June, 1997

Naval Aviation Mishap Rate

776 aircraft destroyed in 1954

FY50-97

33 aircraft destroyed in 1998

Angled decks

Aviation Safety Center

Naval Aviation Maintenance Program (NAMP), 1959

RAG concept initiated

NATOPS Program, 1961

Squadron Safety program

System Safety Designated Aircraft

ACT

FY98

60
50
40
30
20
10
0

50

60

80

2.41

Fiscal Year

1001

Navy & Marine Corps Class A Flight Mishaps

5 year trends indicate a plateau - but FY 98 rate highest since FY 93

2.61   2.13   2.43

88-92   93-97   98
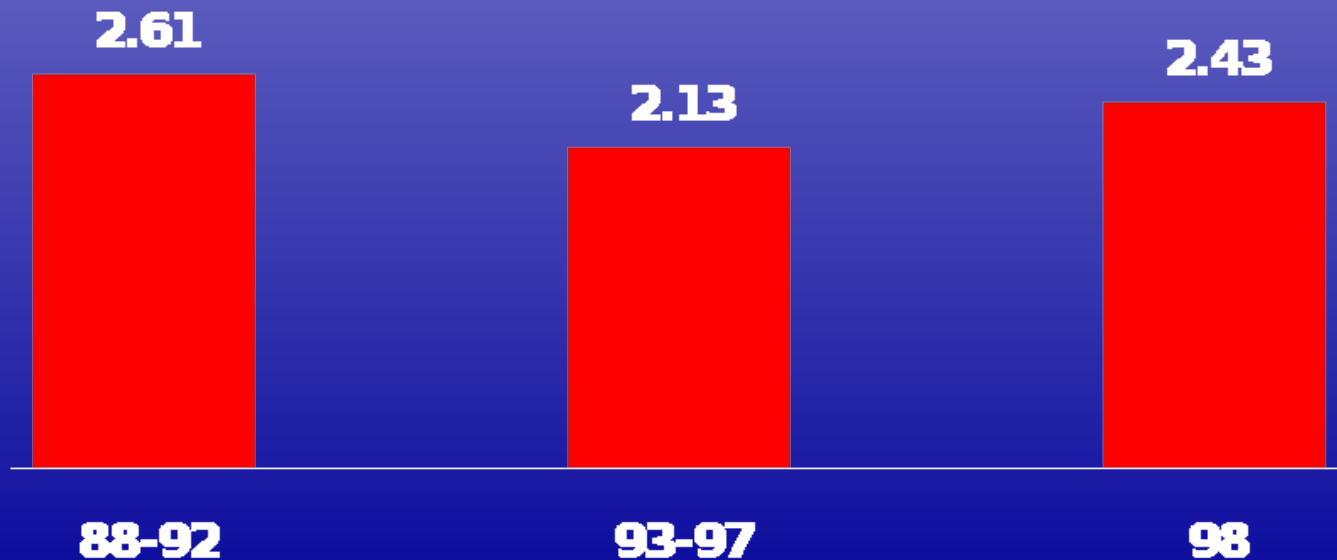
Cost of Mishaps

Navy and Marine Corps, FY98

Total: $891 Million

Aviation $820M

Recreation $12M

PMV $20M

Shore/Ground $24M

Afloat $15M

6002C2
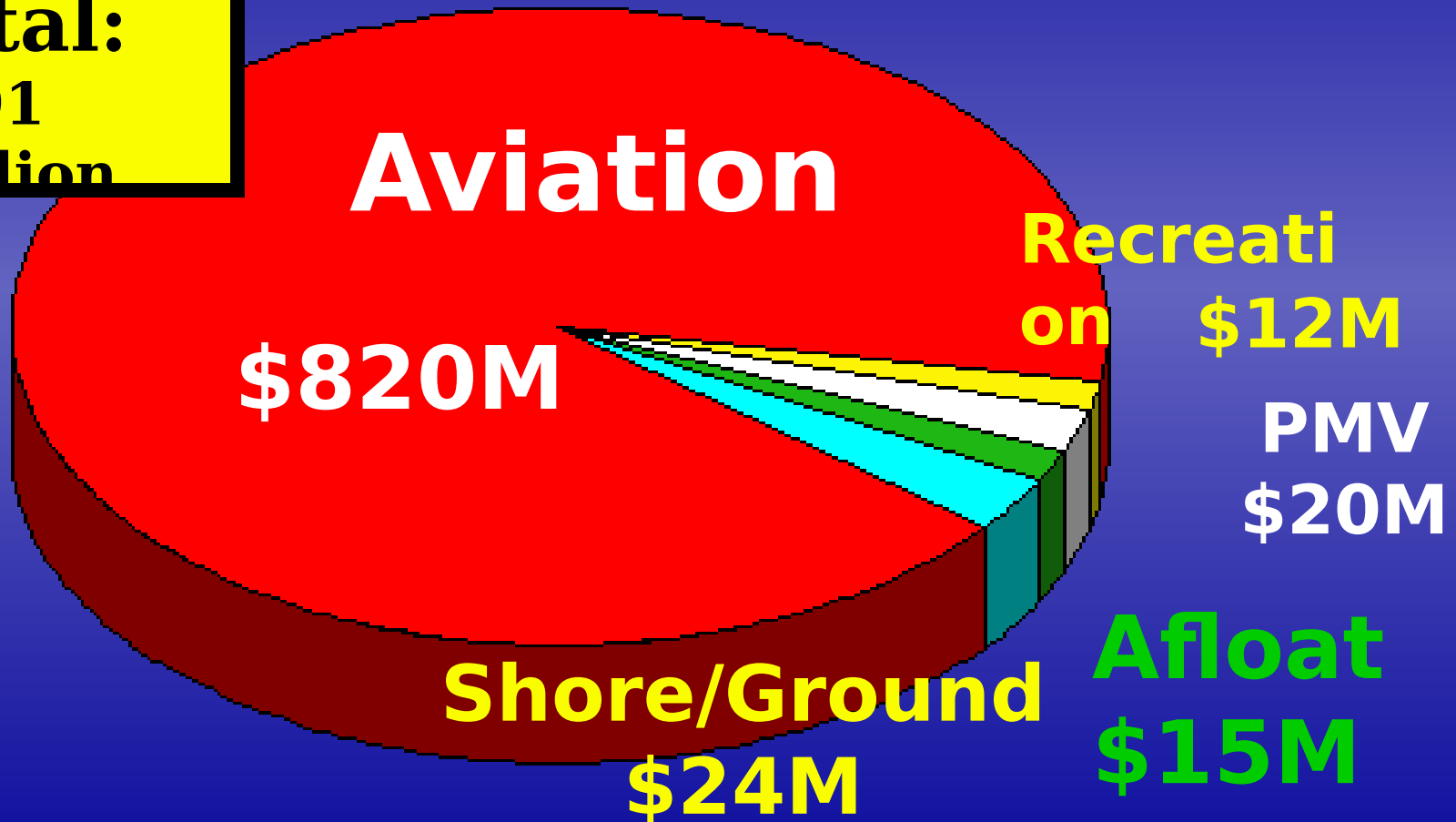
Cost of Mishaps
Navy, FY94-98

Total: $2.7 Billion

Aviation
$2.3B

Recreation $58M

PMV $89M

Afloat $164M

Shore/Ground $117M

6002N3
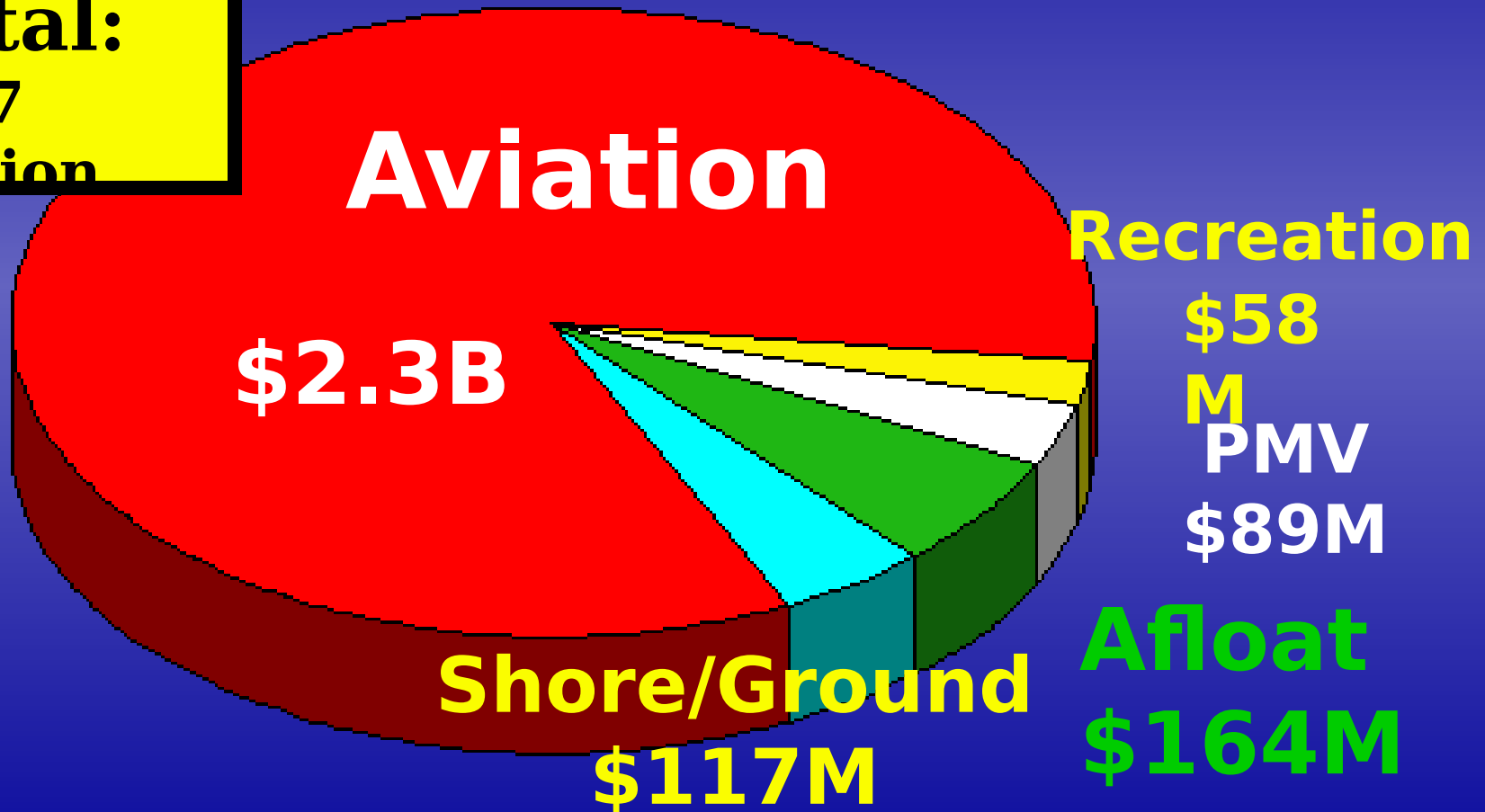
All Services, Class A Flight Mishap Rates

Marines have highest rate

2.55 (7)
2.39 (15)
1.34 (9) Navy
1.13 (13) Army USAF
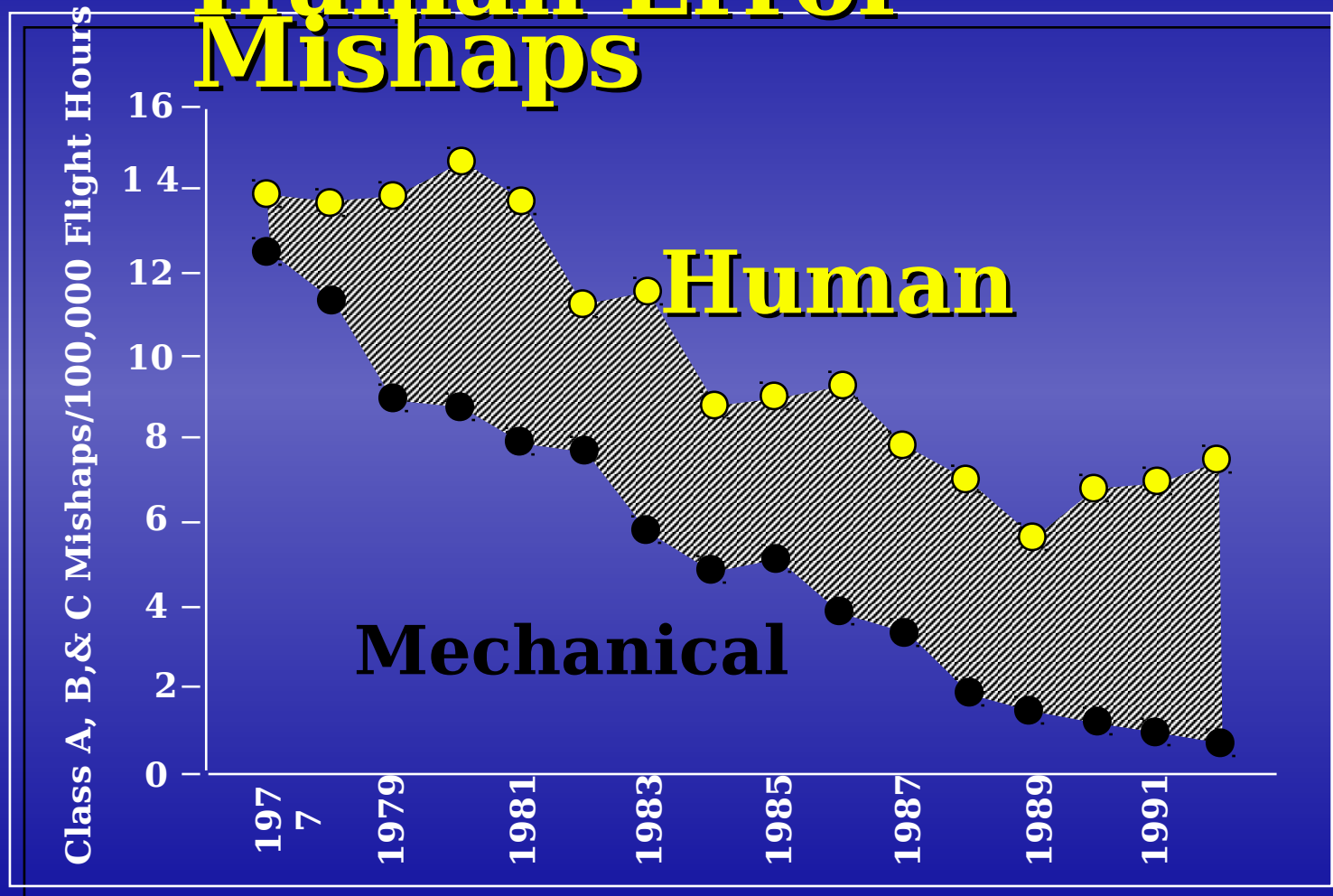
Fiscal Year

1017
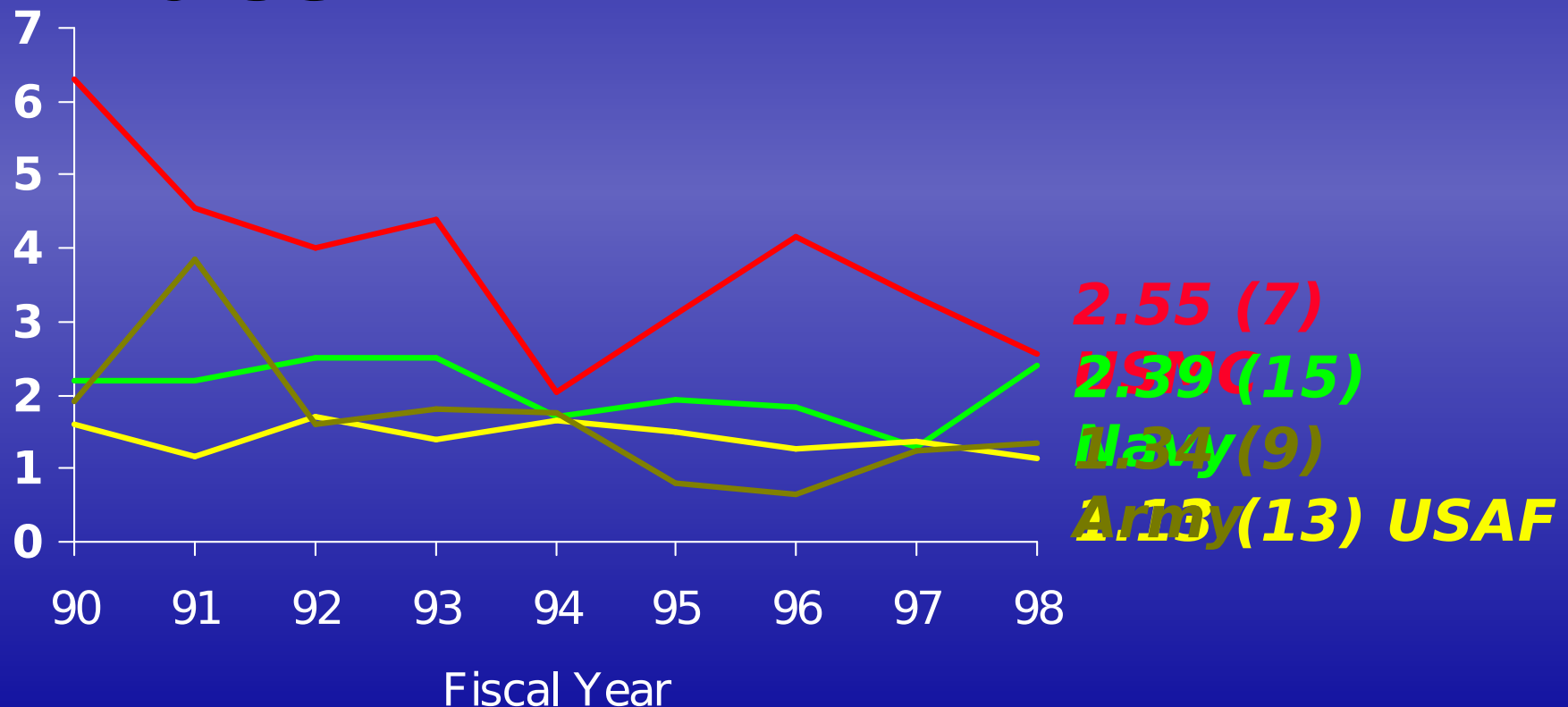
Human Error
A Major
Problem

4 of every 5 Navy Service Class A flight mishaps involve human error.
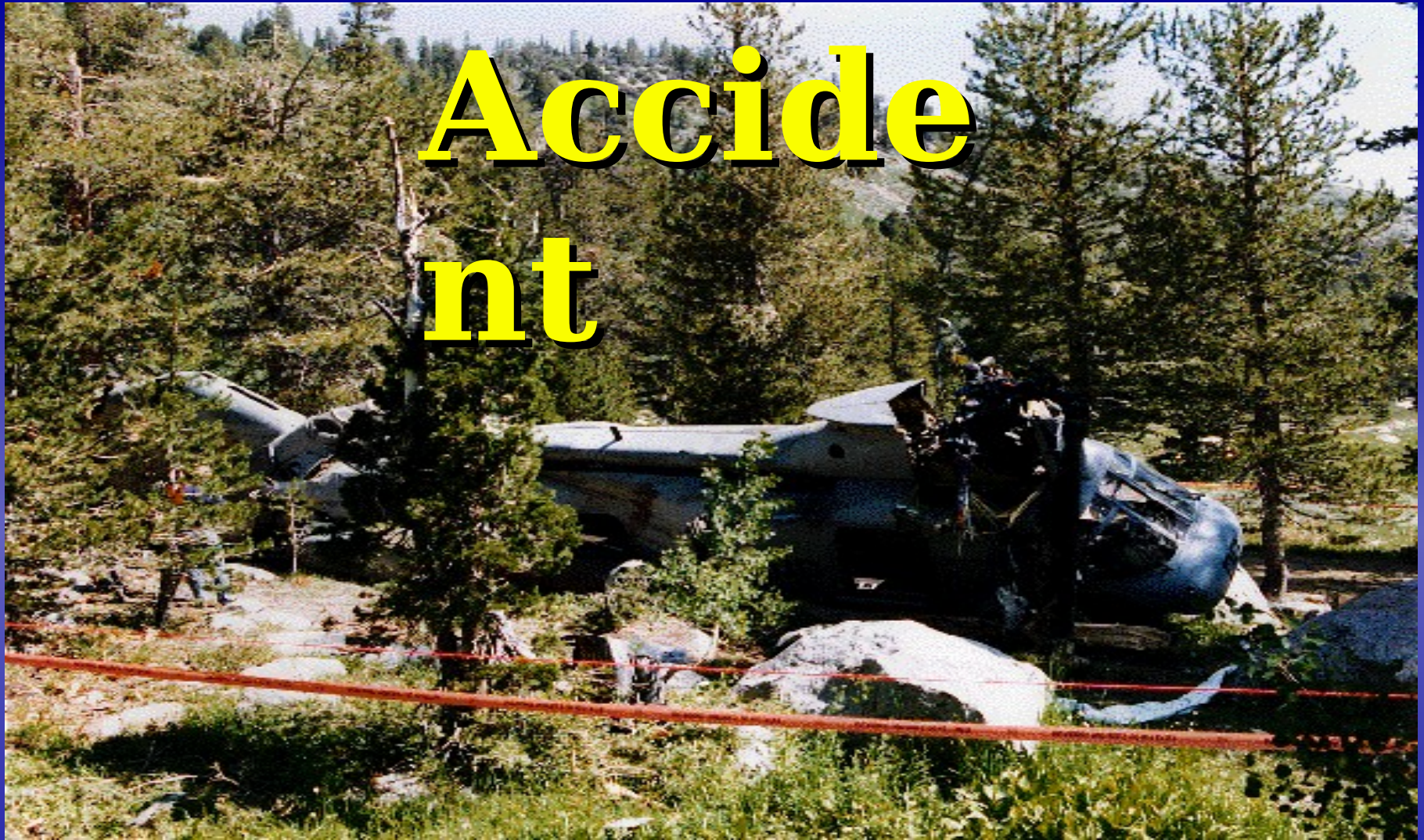
1005

No Steady Decrease in Human Error Mishaps

All Navy-Marine Corps Mishaps, CY 1977-92

1106

Accident

The unplanned result of a behavior that is likely part of an organization's culture

Organizational Culture

"The way we do things here"

- Fundamental building blocks

- Group values and standards

- Medium for growth

- Shaped by leadership

Drives key decisions

Desired Cultural Attitudes

- **Accountability**

- **Integrity**

- **Focus on standards**

- **Continuous and open communication**

- **Intolerance for non-compliance**

- **Consistent decisions**

5011

ORM

Process ...

NOT Program

Operational Risk Management

> A Decision Making Tool

> Increases Ability to Make

Informed Decisions
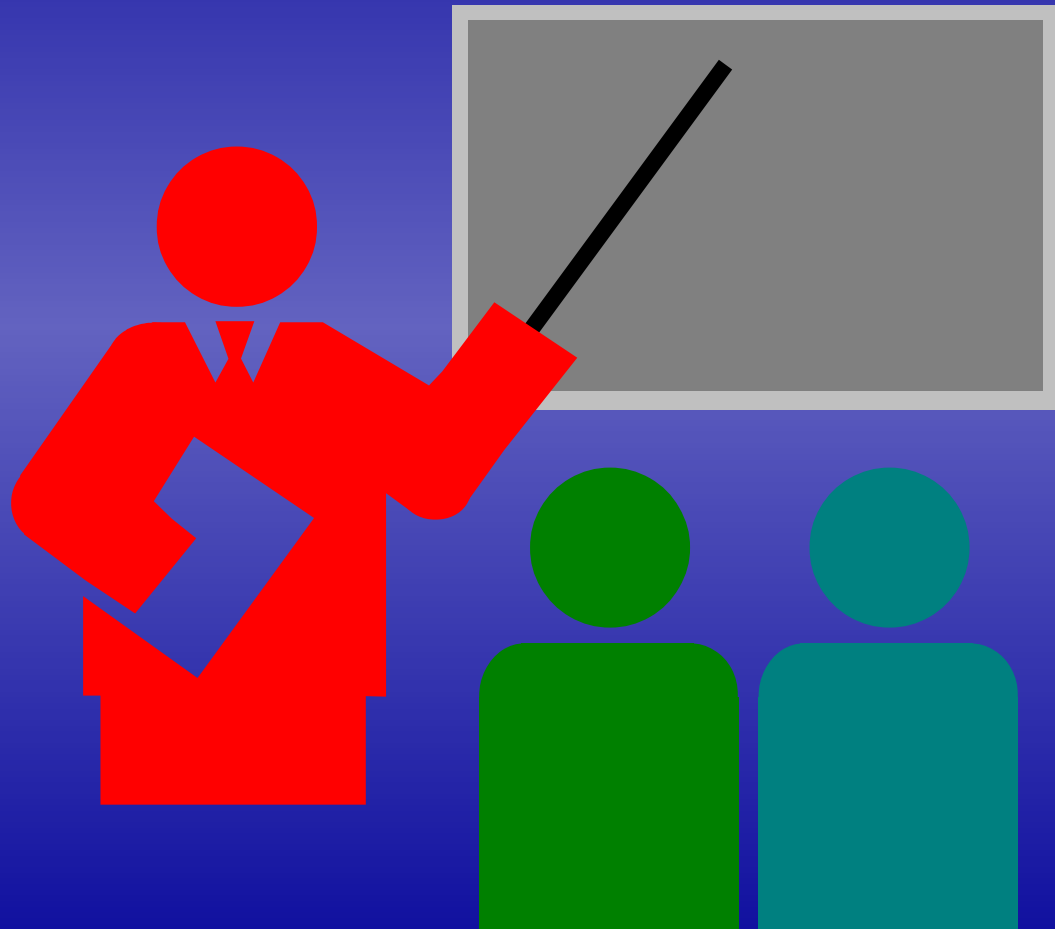
> Reduces Risks to Acceptable   Levels

Operational Risk Management

Goal:

To optimize operational capability and readiness by managing risk to accomplish the mission with minimal loss.
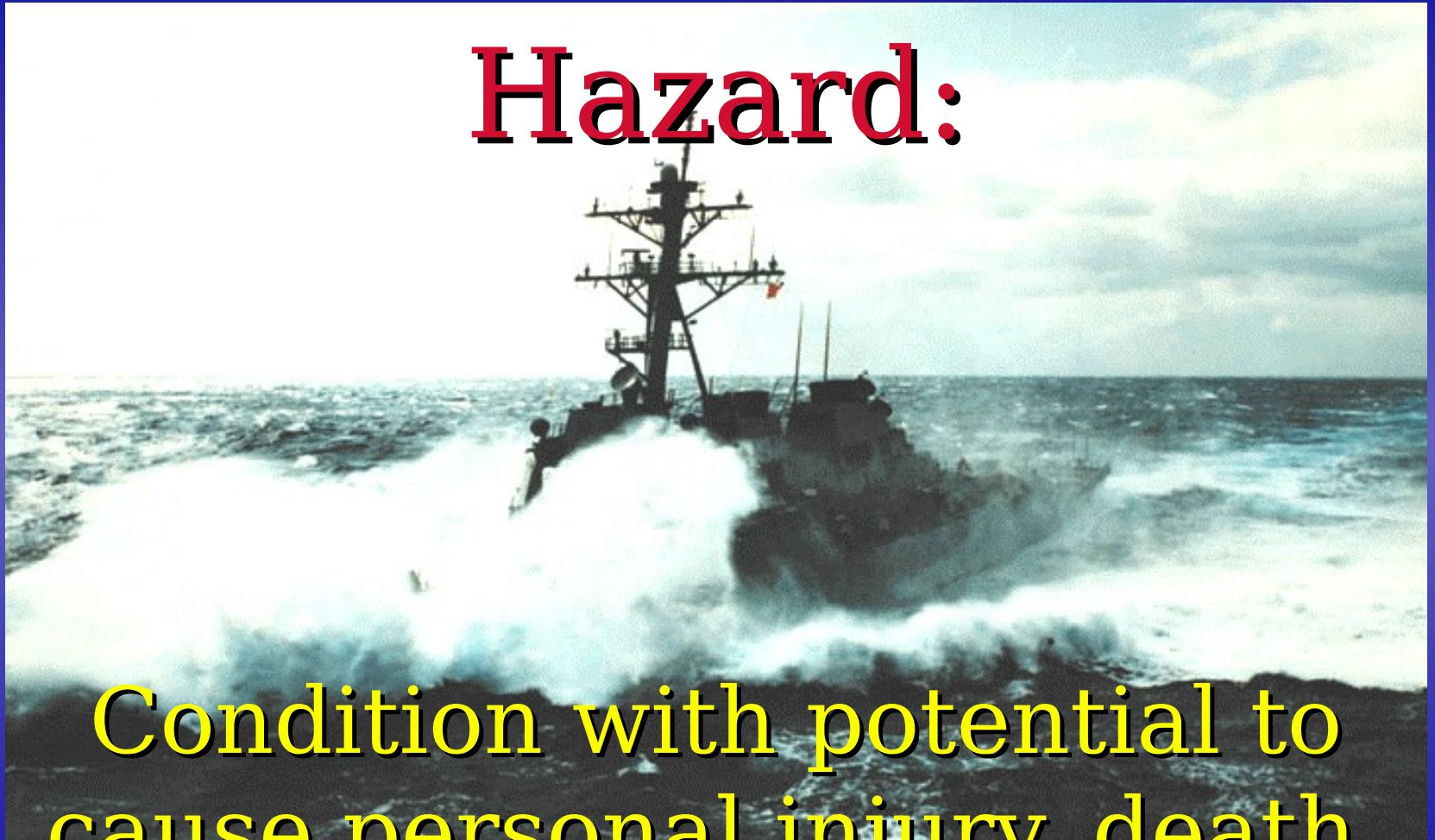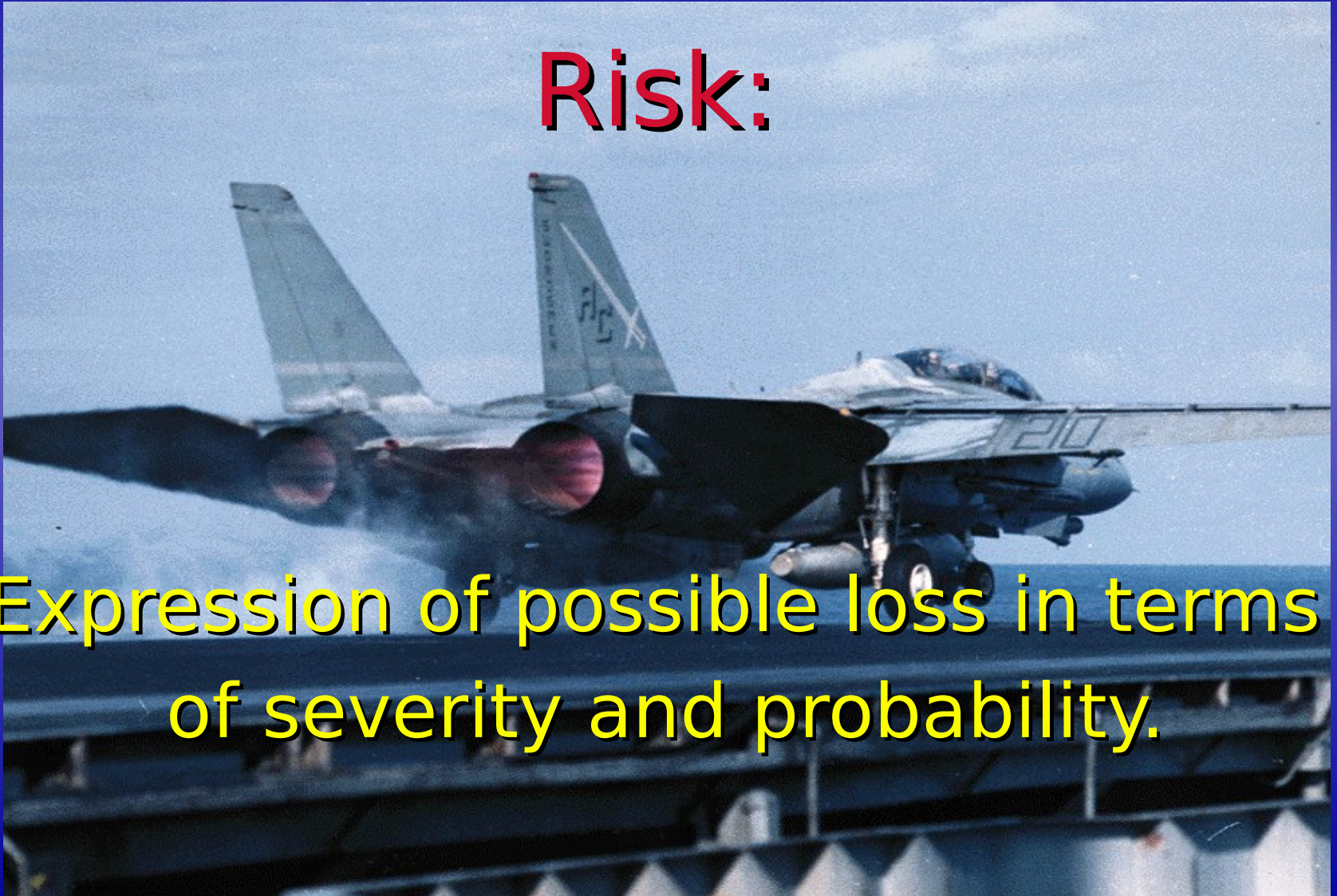
ORM
Terms

ORM Terms

Hazard:

Condition with potential to cause personal injury, death, property damage, or mission degradation

ORM Terms

Risk:

Expression of possible loss in terms of severity and probability.

ORM Terms

Severity:

The worst consequence which can occur as a result of a hazard.

ORM Terms

Probability:

Likelihood that a hazard will result in a mishap or loss.

Hazard	**Risk**
Bad Weather	High Probability Flight Ops Cnx
Flock of Birds	Moderate Chance of Engine FOD
Walking on top of Slippery AC	Some Chance of Fall Producing Severe Injury

ORM Terms

Risk Assessment:

The process of detecting hazards and assessing associated risks.

ORM Terms

Control:

A method for reducing risk for an identified hazard by lowering the probability of occurrence decreasing potential severity or both.
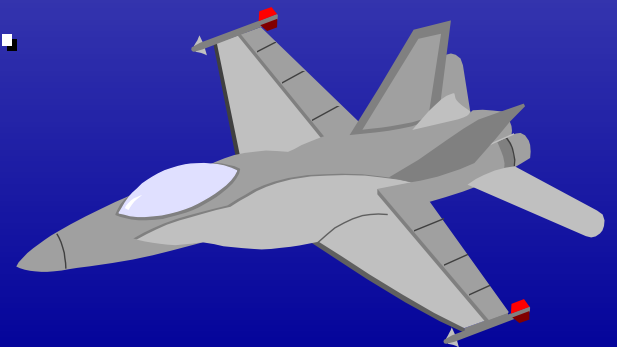
ORM Terms

Operational Risk Management

The process of dealing with risk associated with military operations, which includes risk assessment, risk decision making, and implementation of effective risk controls.

Operational Risk Management Process

1. Identify Hazards

2. Assess Hazards

3. Make Risk Decisions

4. Implement Controls

5. Supervise

Causes of Risk

* Change - The "Mother" of Risk
    * Resource Constraints
    * New Technology
  * Complexity
  * Stress

Causes of Risk
(Cont.)

* Human Nature

* High Energy Levels

* Societal Constraints

* Environmental Influences

* Speed/Tempo of Operation

Four ORM Principles

1. Accept risk when benefits outweigh the cost.

2. Accept no unnecessary risk.

3. Anticipate and manage risk by planning.

4. Make risk decisions at the right level.

ORM vs. Traditional Approach

Systematic	Random, Individual-D
Proactive	Reactive
Integrates All Types of Risk Into Plan	Safety As After-thought On Plan is Done
Common Process/Terms	Non-standard
Conscious Decision Based on Risk vs. Benefit	"Can Do" Regardless of Ris

The Benefits of ORM

> Reduction in Mishaps

> Improved Mission Effectiveness

Operational Risk Management

Levels of Application

1. **Time-critical** - On the run consideration of the 5 Step

2. **Deliberate** - Application of t complete 5-Step Process

3. **In-depth** - Complete 5-Step Process with Detailed Analy

ORM Implementation Concept

- Naval Aviation Leads The Way!

- Leverage the Army's Investment in ORM

- PHASE I: JUMP START for Operational Units

- PHASE II: CNATRA/FRS/FWS Pipeline Training

- PHASE III: CNET/CONTRACTOR Pipeline Trainin

ORM - Implementation Plan

- PHASE I: Jump Start for Operation

    - Naval Safety Center "Train the Trainer" Course

    - Senior Leader Training

    - Squadron Workshop Training

COMPLETE

ORM - Implementation Plan

- PHASE II: Long Term CNATRA - FRS - Pipeline Training

  - VT/HT Flight Instructor (user/adv)
  - Student API (indoc) and VT/HT (user)
  - FRS (user)
  - FWS/Type Wing/MAW/MAG (adv)
  - CO/XO ASC course (adv)

COMPLETED

Why do we need ORM

- USN & All other services decreasing in size

- Number of missions increasing

- Can not afford to sustain the losses we historically suffer during training

ORM IMPLEMENTATION STATUS

DOCTRINE: **Naval doctrinal Pub 1,3 & 5 FMFM - 1**

POLICY: **OPNAVINST 3500.39**

TRAINING:

- Naval Safety Center
- Naval Post Graduate School

ORM:
WHERE ARE THE TRAINERS?

- CNAP: 31
- CNAL: 30
- CNARF: 17
- CNATRA: 44
- NAVAIR: 6
  - CNTWL, NWTSPM, NWTSCL, VX-1, VX-9

Some trainers have already PCSed

Your Next Mishap . . . Who, Not
Why

- ⭐ Self-discipline
- ⭐ Leadership
- ⭐ Training
- ⭐ Standards
- ⭐ Support

5036B

"Life is tough, but it's tougher if you're stupid"

Sergeant John M. Stryker, USMC, in "The Sands of Iwo Jima"

5016